## 2.1 Fishery Control Rule

The fishery control rule provides a protocol for determining sustainable levels of market squid fishing that is enforced through the adoption of specific management tools such as seasonal catch limits, daily trip limits, area closures, time closures, and sustainable levels of egg escapement. These tools are primarily designed to address economic problems associated with excess harvest capacity in open access fisheries. Information regarding the biology of market squid is limited and no reliable estimate of market squid abundance is available. As knowledge increases, management can become less precautionary. The management alternatives proposed by the Department have considered the conditions specific to each region (north and south of Point Conception). Fishery control rule option categories discussed in this document include seasonal catch limitations, daily trip limits, weekend closures, and permits for the live bait fishery and incidental catch of market squid.

### 2.1.1 Seasonal Catch Limitation

A seasonal catch limitation does not allow the catch to expand beyond a maximum volume and may provide some stock protection. The maximum sustainable yield (MSY) in a marine fishery is the highest average yield over time that does not result in a continuing reduction in stock abundance, taking into account fluctuations in abundance and environmental variability. However, there is a lack of data adequate to make a mathematical MSY determination for the market squid fishery making it a data-poor situation. In such cases, NOAA Fisheries guidelines (Restrepo et al. 1998) dictate that a proxy may be used for MSY, and that it is reasonable to use recent average catch from a period when there is no qualitative or quantitative evidence of declining abundance.

El Niño events are an intrinsic part of the California Current and thus, should not be excluded from landings when considering MSY. Historic market squid data indicate that low landing periods correspond with El Niño events when availability of squid to the fishery is greatly reduced. The first fishing season (1999-2000) following the 1997-1998 El Niño event resulted in the highest squid landings on record. Nearly all of the landings were from the southern California fishery (99.7percent); landings reported from the northern fishery were minimal (0.3 percent). This disparity could not have been predicted given the current understanding of market squid or by utilizing temperature inclusive models.

The ability of the California market squid fishery to support landings of 124,309 short tons in 1996-1997, followed by a strong El Niño (1997-1998) and then repeat landings of the same magnitude in 1999-2000 and 2000-2001 suggests that the stock is robust enough to withstand these levels of landings. This is likely due to the semiannual lifespan and the presence of several (minimum seven) cohorts throughout the year.

Currently the status quo seasonal catch limitation is based on the three-year recent average catch and the assumption that the stock is above $B_{MSY}$ (average spawning biomass) which is approximately 125,000 short tons as currently implemented in interim regulations.

<u>Options for Establishing a Seasonal Catch Limitation</u>

Option A1: Establish a statewide seasonal catch limitation of 80,000 tons. This seasonal catch limitation is based on the seasonal catch limitation on the three-year recent average catch and the assumption that the stock is below the average spawning biomass ($B_{MSY}$) and above the minimum stock size threshold.

Option A2 (*proposed action*): Establish a statewide seasonal catch limitation of 118,000 tons. This seasonal catch limitation is based on the three-year recent average catch and the assumption that the stock is above the $B_{MSY.}$

Option A3: Establish regional seasonal catch limitations based on either a multi-year recent average catch for each region with the assumption that the stock is above $B_{MSY}$. The regions would be north and south of Point Conception.

Option A4: Establish a statewide seasonal catch limitation based on environmental conditions as recommended by the SRSC: a seasonal harvest of 115,000 tons in a non-El Niño period and a landings cap of 11,000 tons during an El Niño period.

Option A5 (*status quo*): Establish a statewide seasonal catch limitation of 125,000 tons, a value in close proximity to the highest catch on record.

Option A6: Do not set a seasonal catch limitation. The SFAC did not support any landings limit. Most fishers and processors opposed the landings limit. There was speculation that the likelihood of repeating a catch of 125,000 tons in a season is unlikely given the implementation of weekend closures. Landings for the 2001-2002 season were 123,411, which was 98.7 percent of the limit.

### 2.1.2 Daily Trip Limits for Vessels Landing Squid

The purpose for implementing daily trip limits for market squid vessels and brail vessels is to prevent change in the general size composition of individual vessels once permits become transferable. There has been a steady increase in daily trip limits for market squid from 1981 to the present time. Establishing daily trip limits for squid fishing vessels would prevent current vessels from increasing catch volume on a per-trip basis, should market-imposed trip limits be dissolved or technological developments allow for increased efficiency. Daily trip limits will protect the resource through distribution of harvest throughout the season, which may be of extreme importance since the fishery targets spawning squid. When combined with a restricted access program (see below) daily trip limits would serve to disseminate the fishery resulting in reduced fishing effort on specific spawning aggregations and locations.

The current fishery is controlled by market orders. Although there are vessels in the current fleet capable of delivering loads well in excess of 60 tons, there is rarely the opportunity to deliver a vessel's full capacity tons because market-imposed trip limits of 30 tons are routine, although a vessel may deliver to more than one processor daily. Processors set the limit at 30 tons because of limited processing and freezing capacity. Market squid are included as part of the CPSFMP as a monitored-only species. The CPSFMP federal guidelines limit CPS finfish harvest to a approximately 137.8 short tons daily trip limit, but the majority of the vessels are well under this volume.

Options for Establishing Daily Trip Limits

Option C1: Establish a daily trip limit between 30-137.8 short tons daily for market squid vessels and 15 tons for brail vessels.

Option C2 *(status quo/proposed action)*: Do not establish daily trip limits for the market squid fishery.

### 2.1.3 Weekend Closure

Interim regulations (CCR Title 14 §149) prohibit the take of market squid for commercial purposes each week between noon Friday and noon Sunday from Point Conception south to the U.S.-Mexico border. The closure extends an existing squid fishery closure for the same time period north from Point Conception to the California-Oregon border (FGC §8420.5). The weekend closure north of Point Conception has been in effect since 1983 and was put in place to reduce conflict with coastal communities. The regulations affect vessels catching squid and vessels using lights to attract squid, and do not apply to those pursuing squid for live-bait purposes. This precautionary measure was adopted to provide spawning squid at least two consecutive nights each week respite from fishing pressure and to address complaints from coastal communities concerning bright attracting lights used by market squid vessels. A two-day per week closure allows for two consecutive nights of uninterrupted spawning. Unlike a seasonal quota or closure, this measure spreads the escapement throughout the year, rather than concentrating it during one particular period. Prohibiting fishing activity on weekends also helps alleviate conflict with other interest groups operating in the same areas.

Options for Weekend Closures

Option D1 (*status quo/proposed action*): Continue closures from noon Friday to noon Sunday from the U.S.-Mexico border to the California-Oregon border.

Option D2: Do not continue weekend closures.

### 2.1.4 Live Bait Fishery and Incidental Catch of Market Squid

Market squid are an important source of live bait for the California recreational fishing industry. A small volume also is taken by the commercial live bait industry using brail, lampara, or drum seine gear. This fishery is a high value use of squid, supplying bait to valuable recreational fisheries along the West Coast, primarily in southern California. Live bait catch is largely dependent on local availability, and is sold by vessels either at sea or at live bait dealerships in several harbors statewide. Since the sale of live bait in California is not documented in a manner similar to that used for the commercial sale of squid, estimates of tonnage and value are not available. Present market squid regulations do not require a squid permit when fishing for live bait. It is assumed the take of live bait is minor, but because the actual amount of squid taken as live bait is unknown, bait logs would provide information about the impact of this

industry on the resource and it is recommended that the current voluntary live bait logs be modified to include market squid.

Current regulations [FGC § 8421(b)] do not require vessels taking or landing market squid for commercial purposes to have a market squid permit if the incidental catch of market squid does not exceed two tons in any calendar day. The volume of squid taken in this manner is small and landings of market squid less than or equal to two tons has been decreasing since the 1980s.

Options for Live Bait Fishery and Incidental Catch of Market Squid

Option F1 (*status quo/proposed action*): Continue existing regulations that do not require a squid permit when fishing for live bait. Continue existing regulations that do not require a market squid permit for vessels landing or taking market squid not to exceed two tons in a calendar day.

Option F2: Establish a permit for the taking of market squid as live bait. Continue existing regulations that do not require a market squid permit for vessels landing or taking squid not to exceed two tons in a calendar day.

## 2.2 Squid Harvest Replenishment Areas

MPAs are a tool used to manage and conserve marine resources. They are sectors of the ocean set aside to protect and restore habitats and ecosystems, conserve biological diversity and provide a refuge for sea life. MPAs would serve as harvest replenishment areas for market squid because effort would be limited geographically and protect habitat of market squid. MPAs ensure that the MLMA's objectives for protection of habitat and ecosystem integrity as well as sustainable fisheries are met. The MSFMP recognizes the authority of the Marine Life Protection Act (MLPA) to design a Master Plan for MPAs in California. These areas have the potential to serve as harvest replenishment areas for market squid. Further, the market squid resource is a significant forage component in the diets of seabirds, marine mammals and fish and these MPAs should act a forage reserves for these species.

In October 2002, the Commission designated 12 new MPAs at the northern Channel Islands (three of which replace existing reserves at Anacapa, Santa Barbara and San Miguel islands). These areas include known commercial squid fishing sites at Santa Barbara, Anacapa, Santa Cruz, and Santa Rosa islands. In addition to the closures at the northern Channel Islands, commercial fishermen are not allowed to fish in state designated ecological reserves using roundhaul nets. Several existing reserves are known to be market squid spawning sites (e.g., at Carmel Bay, Point Lobos, Santa Catalina Island, and Santa Monica Bay); may serve as harvest replenishment areas for market squid.

Aside from the MPA process for the Channel Islands, the MLPA requires that the Department develop a plan for establishing a network of MPAs in California waters. These MPAs will supplement the current reserves in addition to any new areas protected at the Channel Islands and should consider harvest replenishment areas for market squid.

Options for Squid Harvest Replenishment Areas

Option G1 (*status quo/proposed action*): Do not set aside specific areas as harvest replenishment areas for market squid.

Option G2: Close all waters within depths of 100 fathoms around San Nicholas Island.

### 2.3. Restricted Access

Restricted access programs are primarily designed to address economic problems associated with excess harvest capacity in open access fisheries. In a fishery such as the market squid commercial fishery, the main objective of a restricted access program would be to assure the greatest economic viability from the harvest of market squid. A restricted access program for the squid fishery should serve to balance the need to provide a viable economic harvest with the need to protect the squid resource. The restricted access options discussed in this document include; limited entry and capacity goals, and initial issuance and transferability of market squid fleet permits. Most of the restricted access options function to reduce the number of current vessels in the fishery, the exception being three options that propose no capacity goals, no permits program, or an increase in the current number of permits.

#### 2.3.1 Limited Entry/Capacity Goals

Limiting the number of vessels may be one method of reducing take in order to protect the market squid resource. Even when fishery management specifies catch limits, season length, and gear allowed, fishermen still compete to catch as much as possible in the shortest period of time. Limited entry would reduce the number of vessels but not necessarily the effort as the remaining vessels would compensate for the market demand. Fewer boats in the fleet will result in the fleet becoming more specialized, and these vessels will presumably need to be more productive for squid, resulting in a fleet with minimal excess or latent capacity.

Prior to the 1998-1999 season, the squid fishery was an open access fishery. In 1996, new demand and markets for squid attracted many fishing vessels from other states. This influx of fishing vessels increased competition. Vessels currently participating in the market squid fishery are capable of harvesting more squid than is available under current or likely future biomass conditions. Available information indicates that market squid vessels permitted in the 2000-2001 season could harvest in excess of 15,000 tons a day operating at maximum efficiency, an amount in excess of the volume of squid likely to be available under the most optimum of conditions.

Establishing limited entry qualifying criteria is a first step in reducing fleet size from the 184 squid vessels and 41 light boats currently permitted to achieve the selected capacity goal, provided the current number of vessels is in excess of the selected goal. Each option under Restricted Access provides different permitting strategies and results in a different number of vessels anticipated to qualify.

The brail fleet produces only a small fraction of the overall take of market squid, but it is in the best interest of the fishery to curtail growth of this sector until more information is available by preventing an open-access situation. Brail permits would allow light boats to land squid (> 2 tons) while lighting for seiners. Additionally, at any time these vessels could develop more efficient methods of operation which could change the overall catch contribution made by this component of the fishery.

Options for Market Squid Fleet Capacity Goal

Option H1: Establish a capacity goal for market squid vessel permits that produces a highly productive and more specialized fleet. This option assumes that the maximum catch that would ever be possible for each boat is caught on every trip. If the vessel fished a maximum of 130 days per season, 10 vessels operating in this manner could land the maximum seasonal catch. This option would then set the capacity goal for both market squid vessel permits and market squid light boat permits at 10 permits each. The capacity goal for market squid brail permits would be 18 permits. The capacity goal for non-transferable market squid vessel permits and market squid brail permits is zero.

Option H.2: Establish a capacity goal for market squid vessel permits that produces a moderately productive and specialized fleet. This option assumes that the maximum catch that each boat made is caught on every trip. If the vessel fished the highest average number of day per season (45), 52 vessels operating in this manner would land the maximum seasonal catch. This option would then set the capacity goal for both market squid vessel permits and market squid light boat permits at 52. The capacity goal for market squid brail permits would be 18 permits. The capacity goal for non-transferable market squid vessel permits and non-transferable market squid brail permits is zero.

Option H3 (*proposed action*): Establish a capacity goal for market squid vessel permits that produces a moderately productive and specialized fleet. This option assumes that the maximum catch that each boat made is caught on every trip. If the vessel fished the highest average number of days per season (45), 52 vessels operating in this manner would land the maximum seasonal catch. This option would then set the capacity goal for both market squid vessel permits and market squid light boat permits at 52 each. Because brail vessels function largely as light boats and the goal of the plan is to match the number of light boats to the number of market squid vessel permits, brail vessel permits would be part of the total light boat capacity goal of 52 vessels. The capacity goal for market squid brail permits as a division of light boat permits would be set at 18 permits. The capacity goal for vessels operating solely as light boats would be 34. The capacity goal for non-transferable market squid vessel permits and non-transferable market squid brail permits is zero.

Option H4: Establish a capacity goal for market squid vessels that produces a less productive and less specialized fleet, producing a more diverse fleet. This option assumes that the average catch for each boat continues. If the vessel fished a maximum of 45 days per season, 104 vessels operating in this manner would land the maximum seasonal catch. This option would then set the capacity goal for both market squid vessel permits and market squid light boat permits at 104 permits. The capacity goal for market squid brail permits would be 18 permits. The capacity goal for non-transferable market squid vessel permits and market squid brail permits is zero.

Option H5 (*status quo*): Do not establish a capacity goal (no limited entry program). Currently there are 184 squid vessels and 41 light boats, and no brail permits exist.

### 2.3.2 Initial Issuance of Market Squid Fleet Permits

California has had a practice of giving preference to vessels of fishermen with past participation when issuing restricted access permits. Among fishermen or vessels with past participation in the squid fishery, preference for permits may be based on factors such as years of participation in the fishery or level of participation (landings). The Commission's policy to determine qualification for an initial permit has three elements. First, the policy for all restricted access fisheries assumes that initiating a restricted access program will not increase the recent level of fishing effort. Second, initial issuance of permits will only be to the current owners of qualifying vessels. Third, in order to meet the needs of a particular fishery, it may be desirable to modify the approach of giving permits only to current owners of qualifying vessels. Currently, the status quo condition has 184 market squid vessels and 41 market squid light boats and no permit exists for market squid brail.

Options for Initial Issuance of Market Squid Fleet Permits

Option I1 (*proposed action*):

- Market squid vessel permit (transferable): a) possession of a current market squid vessel permit and b) a minimum number of landings (50-150 landings) during a specific window period.
- Market squid vessel permit (non-transferable): a) have possessed a California commercial fishing license for at least 20 years, and b) have made at least 33-50 landings of market squid in any one licensed season.
- Market squid brail permit (transferable): a) possession of a current market squid vessel permit and b) a minimum number of landings (5-25 landings) during a specific window period.
- Market squid brail (non-transferable): a) have possessed a California commercial fishing license for at least 20 years, and b) have made a minimum of landings (5-25).
- Market squid light boat permit (transferable): a) possession of either a current market squid vessel permit or a current market squid light boat permit and b) have submitted one light boat log during a specific window.
- No provisions for non-transferable market squid light boat permits are proposed.

Option I2 (*status quo*): Continue with existing moratorium program (184 market squid vessels and 41 market squid light boats qualify). There would be no issuance of market squid brail permits because that permit does not exist at this time.

Option I3: Allow permit purchase by any permitholder who held a permit in the first year of the moratorium (301 permits were purchased: 239 vessel permits and 62 light boat permits). There would be no market squid brail permits because that permit does not exist at this time.

Option I4:

- Market squid vessel permit (transferable): a) possession of a current market squid vessel permit and b) a minimal number of market squid landings during a specific window period, OR c) possession of a current market squid vessel permit, and d) have possessed a California commercial fishing license for at least 20 years, and e) have made a minimum number of landings (33-50) in one licensed season (approximately 18 additional vessels qualify).
- There are no provisions for non-transferable market squid vessel permits.
- Market squid brail permit (transferable): a) possession of a current market squid vessel permit and b) a minimal number of landings (5-25) during a specific window period, OR c) have possessed a California commercial fishing license for at least 20 years, and d) have made at least 10 landings of market squid with brail gear in any one licensed season (approximately 15 additional vessels qualify).
- There are no provisions for non-transferable market squid brail permits.
- Market squid light boat permit (transferable): a) possession of either a current market squid vessel permit or a current market squid light boat permit and b) have submitted one light boat log by 31 December 2000 (64 vessels qualify)
- There are no provisions for non-transferable market squid light boat permits.

Option I5: Do not have a permit program.

**2.3.3 Transferability of Market Squid Permits** (options K, L, M)

Limited entry permits are affixed to the owner (or corporation) of record of the vessel that qualifies. If there are more permits in the fishery than the capacity goal, transferability provisions can help meet the capacity goal over time while preventing disruption to the fishery. Under the moratorium established for the fishery in 1998, transferability was disallowed except in cases of the permitted vessel being lost, stolen, destroyed or suffering a major mechanical breakdown. Following Commission restricted access guidelines, described in Section 1 of the MSFMP, transferability of limited entry permits should be allowed provided the provisions result in attainment of the capacity goal. The further away the initial number of permits are from the capacity goal, the more restrictive the provisions for transferability will need to be to achieve the capacity goal over time. As with initial issuance criteria, options associated with K, L, and M are intended to represent the scope of options available.

Market Squid Vessel Permit Transfer Options

Option K1 (*status quo*): Do not allow permit transfers except in cases of major mechanical breakdown or loss of the vessel.

Option K2: Establish full transferability of market squid vessel permits.

Option K.3 (*proposed* action):

- Establish full transferability of market squid vessel permits based on comparable capacity (within 10%).
- Establish transferability of market squid vessel permits to a vessel of larger capacity under a “2 for 1” permit retirement – this option will allow vessel owners to increase their vessel capacity by transferring their permit to a replacement

boat and surrendering one or two additional permits. Permit holders wishing to increase their current capacity more than 10 percent must acquire another market squid vessel permit and surrender it to the Department for retirement.

- Individuals wishing to gain entry into the fishery must secure two permits: one permit must be surrendered the Department for retirement and one permit for issuance to a vessel that will not increase the fishing capacity (not to exceed a maximum of 10% increase). This will allow a reduction in the number of permits. Market squid light boat permits cannot be used to secure a vessel permit.

### 2.3.4 Market Squid Brail Permit Transfer Options

Option L1:(*status quo*): Do not allow permit transfers except in cases of major mechanical breakdown or loss of the vessel – this option will allow for more rapid attrition of the fleet, however, it likely will not meet the practical needs of working vessels and can have implications for vessel safety.

Option L2: Establish full transferability of market squid brail permits – provided a 15-ton daily trip limit for these vessels is implemented, there is no specific reason to restrict transfer of brail permits as they are a minor component of the fleet and do not significantly contribute to the fleet capacity.

Option L3 (*proposed action*): Establish full transferability of market squid brail permits based on comparable capacity (within 10 percent) – should no daily trip limit be adopted for brail boats, this would be a viable option. This helps to meet the needs of the fleet without significantly increasing capacity as no permits currently exist.

### 2.3.5 Market Squid Light Boat Permit Transfer Options

Option M1 (*status quo*): Do not allow permit transfers except in cases of major mechanical breakdown or loss of the vessel – this option will allow for more rapid attrition of the fleet, however, it likely will not meet the practical needs of working vessels and can have implications for vessel safety.

Option M2: Establish full transferability of light boat permits – this would be allowed only if the initial number of permits issued is equal to or less than the capacity goal.

Option M3 (*proposed action*): Establish full transferability of light boat permits with a "2 for 1" permit retirement – this would help to meet the fleets' needs and help to achieve the light boat capacity goal.

Option M4 (*proposed action*): Trade either two, three, or four light boat permits for one brail permit – a light boat may acquire and surrender additional light boat permits in exchange for a brail permit.

## 2.4 Other Concerns

Options discussed in this document include lighting and gear restrictions and time and area closures.

### 2.4.1 Lighting Gear Restrictions

The growth of the southern California fishery has coincided with complaints from coastal communities about the intensity of the squid vessel lights. Regulations served to reduce the total amount of light transmitted to coastal communities, specifically the cities of Monterey and Malibu. Since shielding and wattage restrictions were put in place (May 2000), the City of Malibu, the Channel Islands Coast Guard, and the Malibu/Lost Hills Sheriff Department, have not received any complaints about squid light vessels. In January 2002, the Laguna Beach police received about 40 calls from residents wondering what was happening in the waters less than half a mile offshore where the squid fleet was centered. Although squid boats fish in this area almost every year, the large number of vessels was unusual. In 2002, fishing activity increased three-fold in Monterey compared with average landings. Several general complaints about squid fishing lights were received from the community. Spawning squid do not appear to have regular spawning locations that they target. It is not known what prompts squid to deposit their eggs at certain locations. Further, it is not known if squid show site fidelity, returning to the same spawning site where they hatched. These factors, combined with environmental changes affect where the squid fishery operates at any given time. Some seasons, fishing is concentrated along the coastline while other times it is further offshore at islands.

In the spring of 1999, seabird researchers, the American Trader Trustee Council, and the Channel Islands National Park Service became concerned about potential effects on nesting seabirds on islands used by the squid fishery. Specifically, their concerns centered on disturbance to the island breeding colonies from high wattage lights and noise from market squid fishing vessels and they requested that the Department take action to prevent potential new impacts on the nesting birds.

Shielding lights should block light that is emitted upward or in a horizontal direction from the bulb. The Department evaluated the light emitted from one shielded squid fishing vessel with the emissions from one unshielded vessel. Several light measurements were taken from four different distances for the shielded and unshielded fishing vessels and were repeated at different elevations [sea level, 150 ft above sea level (ASL), and 300 ft ASL]. The results indicate that shielded lights emit less light at approximately one-half mile offshore as compared with an unshielded vessel one-mile from shore for elevations up to 300 ft ASL. However, seabirds may nest at elevations higher than 300 ft. For example, 85 percent of California brown pelicans nesting at West Anacapa Island nest at elevations greater than 300 ft.

Because of the inference that lights from the squid fishery interfere with the California brown pelican recovery and population levels of the Xantus's murrelet and ashy storm-petrel, the Department recommended and the Commission adopted a maximum allowable light wattage and specific requirements for orientation and shielding of lights for vessels fishing or lighting for squid. The management measures are: 1) entail the reduction of wattage from any individual vessel to a maximum of 30,000 kilowatts, and 2) require the use of shielding for all vessels commercially fishing or landing squid. These interim regulations went into effect 30 May 2000. At the time the light restrictions were adopted, the Commission asked the Department to report as to effectiveness of the interim measures in a year.

Options for Gear Restrictions

Option O1: (*status quo/proposed action*): Maintain existing gear restrictions which states that each vessel fishing for squid and lighting for squid will utilize a total of no more than 30,000 watts of light to attract squid at any time and that each vessel fishing for squid or lighting for squid will reduce the light scatter of its fishing operations by shielding the entire filament of each light used to attract squid and orient the illumination directly downward, or provide for the illumination to be completely below the surface of the water.

Option O2: Remove existing gear options regarding shields and wattage.

### 2.4.2 Area and Time Closures to Address Seabird Disturbance

Concerns about potential disturbance effects on nesting seabirds on islands adjacent to waters fished by the squid fishery were raised by seabird researchers, the American Trader Trustee Council, and the Channel Islands National Park Service in the spring of 1999. Specifically, their concerns centered on disturbance to the island breeding colonies from high wattage lights and noise from market squid fishing vessels and they requested that the Department take action to prevent potential new impacts on the nesting birds. Three species were the focus of the squid fishery interaction with seabirds: the California brown pelican, ashy storm-petrel, and Xantus's murrelet. California brown pelicans are federally and state-listed as endangered and are a fully protected species. Ashy storm-petrels are considered a Species of Special Concern (SSC) by the Department and they are also considered a globally rare seabird species (one of the ten rarest seabird species in the North Pacific). Xantus's murrelets are considered a SSC and are considered a globally rare seabird species. Additionally, a petition was filed for both state and federal listing and in October 2002, the Commission designated the Xantus's murrelet as a threatened species candidate under the California Endangered Species Act (CESA) and adopted emergency regulations governing incidental take of the murrelet during the candidacy period. When the candidacy period is over the Commission will decide whether to list the murrelet under CESA and, if listed, designate it as a threatened or endangered species. If Xantus's murrelets are not listed they will remain a SSC. The emergency regulations are intended to reduce night-time disturbance near breeding colonies and are effective for a maximum of 240 days. During the one-year candidacy period, Xantus's murrelets receive the same protection under CESA as species that are officially listed as threatened or endangered. The emergency regulations authorize incidental take from 1 February through 15 July, from the mean high tide line extending 1 nautical mile around the entire shoreline of Anacapa and Santa Barbara islands, if vessels are not engaged in night fishing or night diving (dusk to dawn), are not using external loud speakers, and lighting on the vessel is limited to navigational lighting necessary for safe operations.

Options for Area and Time Closures to Address Seabird Issue

Option P1: Establish areas that are closed to squid fishing around San Miguel, Anacapa and Santa Barbara islands from 1 February through 30 September. The area closure should be one nautical mile from the high water mark for these islands and would

exclude the Channel Island MPAs, implemented in April 2003, because no commercial squid fishing is allowed in these areas. The closure would protect 14 seabird species (including one endangered, one candidate/SSC, and five other SSC) during their breeding seasons.

Option P2: Establish areas that are closed to squid fishing around Anacapa and Santa Barbara islands from 1 February through 30 September. The area closure should be one nautical mile from the high water mark for these islands and would exclude the Channel Island MPAs, implemented in April 2003, because no commercial squid fishing is presently allowed in these areas. The closure would protect 12 seabird species (including one endangered, one candidate/SSC, and three other SSC) during their breeding seasons.

Option P3: Establish areas that are closed to squid fishing using attracting lights around San Miguel, Anacapa and Santa Barbara islands from 1 February through 30 September. The area closure should be one nautical mile from the high water mark for these islands and would exclude the Channel Island MPAs, implemented in April 2003, because no commercial squid fishing is presently allowed in these areas. The closure is designed to offset the potential negative impacts of light pollution at seabird rookeries for 14 seabird species (including one endangered, one candidate/SSC, and five other SSC) during their breeding seasons.

Option P4 *(proposed action):* Establish area and time closure areas for fishing for squid using attracting lights around Anacapa and Santa Barbara islands from 1 February through 30 September. The area closure should be one nautical mile from the high water mark for these islands and would exclude the Channel Island MPAs established in 2002 because no commercial squid fishing is presently allowed in these areas. The closure should offset the potential negative impacts of light pollution at seabird rookeries for 12 seabird species (including one endangered, one candidate/SSC, and three other SSC) during their breeding seasons.

Option P5 (*status quo*): Do not establish area and time closure sites for seabird rookeries protection.